



2817  
PATENT  
89160.0010

In re application of:  
**GURVICH et al.**

Art Unit: 2817  
Examiner: Takaoka, Dean O.

Serial No: 10/045,837

Filed: January 11, 2002

For: **MICROSTRIP COUPLER**

|  |                |
|--|----------------|
| I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:<br>Mail Stop IDS, Commissioner for Patents<br>P.O. Box 1450, Alexandria, VA 22313-1450, on<br>September 17, 2003 |                |
| Date of Deposit  | Ellen Pritsker |
| Name   |                |
| Signature  |                |

**TRANSMITTAL OF INFORMATION  
DISCLOSURE STATEMENT**

Mail Stop IDS  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sirs:

1. ☐ The information disclosure statement submitted herewith is being filed within three months of the filing date of the application other than a continued prosecution application, or within three months of the date of entry into the national stage of an international application, or before the mailing date of a first Office Action on the merits, or before the mailing of a first Office action after the filing of a request for continued examination under §1.114, whichever event occurs last. 37 C.F.R. §1.97(b).
2. ☒ The information disclosure statement transmitted herewith is being filed *after* the period specified in §1.97(b), but *before* the mailing date of a final action under §1.113, or a notice of allowance under §1.311, or an action that otherwise closes prosecution in the application, whichever occurs first. A statement specified in §1.97(e) or a fee set forth in §1.17(p) is included. 37 C.F.R. §1.97(c).

**§1.97(e) STATEMENT**

I, the person signing below, state:

- ☐ that each item of information contained in the information disclosure statement was first cited in the attached communication from a foreign patent office in a counterpart foreign application and that the communication is dated not more than three months prior to the filing of the statement. 37 C.F.R. §1.97(e)(1).

OR

- ☐ that no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in §1.56(c) more than three months prior to the filing of the statement. 37 C.F.R. §1.97(e)(2).

OR FEE

- ☒ Attached is a fee set forth in 37 C.F.R. §1.17(p) for submission of an information disclosure statement under §1.97(c). (\$180.00). [OR:] Please charge the fee set forth in 37 C.F.R. §1.17(p) for submission of an information disclosure statement under §1.97(c) (\$180.00) to Deposit Account No. 50-1314. A copy of this petition is enclosed.
3. ☐ The information disclosure statement transmitted herewith is being filed *after* the period specified in §1.97(c), but before, or simultaneously with the payment of the issue fee. A statement specified in §1.97(e) and a fee set forth in §1.17(p) are included. 37 C.F.R. §1.97(d).

### §1.97(e) STATEMENT

I, the person signing below, state:

- ☐ that each item of information contained in the information disclosure statement was first cited in the attached communication from a foreign patent office in a counterpart foreign application and that the communication is dated not more than three months prior to the filing of the statement. 37 C.F.R. §1.97(e)(1).

OR

- ☐ that no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in §1.56(c) more than three months prior to the filing of the statement. 37 C.F.R. §1.97(e)(2).

**AND FEE**

- ☐ Attached is a fee set forth in 37 C.F.R. §1.17(p) for submission of an information disclosure statement under §1.97(d). (\$180.00).
4. ☒ If it should be determined that for any reason either an insufficient fee or an excessive has been paid, please charge any insufficiency or credit any overpayment necessary to ensure consideration of the information disclosure statement for the above-identified application to Deposit Account No. 50-1314. **A copy of this petition is enclosed.**
5. ☒ A list of reference(s) is in the enclosed Form PTO-1449.

**NON-ENGLISH LANGUAGE REFERENCES**

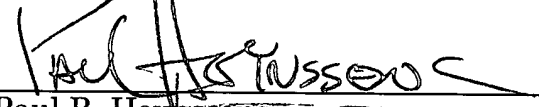
- ☒ Enclosed is a search report for a counterpart application.
- ☐ The specification incorporates comments on the relevancy of Non-English language references.
- ☐ Set forth below are comments provided by the applicant's home country counsel on the relevancy of non-English language references:

Date: September 17, 2003

Biltmore Tower  
500 South Grand Avenue, Suite 1900  
Los Angeles, CA 90071  
Telephone: (213) 337-6700  
Facsimile: (213) 337-6701

Respectfully submitted,  
HOGAN & HARTSON L.L.P.

By:

  
Paul B. Heynssens  
Registration No. 47,648  
Attorney for Applicant(s)

# INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

Docket Number (Optional)  
89160.0010

Application Number  
10/045,837

Applicant

GURVICH et al.

Filing Date  
January 11, 2002

Group Art Unit  
2817

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIALS | DOCUMENT NUMBER | DATE       | NAME           | CLASS | SUBCLASS | FILING DATE IF<br>APPROPRIATE |
|----------------------|-----------------|------------|----------------|-------|----------|-------------------------------|
|                      | 3,516,024       | 6/2/1970   | J. Lange       | 333   | 10       |                               |
|                      | 4,216,446       | 8/5/1980   | H. Iwer        | 333   | 112      |                               |
|                      | 4,288,761       | 9/8/1981   | S. Hopfer      | 333   | 116      |                               |
|                      | 4,636,754       | 1/13/1987  | Presser et al. | 333   | 116      |                               |
|                      | 4,723,307       | 2/2/1988   | Clark et al.   | 455   | 103      |                               |
|                      | 5,159,298       | 10/27/1992 | M. Dydyk       | 333   | 112      |                               |
|                      |                 |            |                |       |          |                               |
|                      |                 |            |                |       |          |                               |
|                      |                 |            |                |       |          |                               |
|                      |                 |            |                |       |          |                               |
|                      |                 |            |                |       |          |                               |
|                      |                 |            |                |       |          |                               |
|                      |                 |            |                |       |          |                               |
|                      |                 |            |                |       |          |                               |
|                      |                 |            |                |       |          |                               |
|                      |                 |            |                |       |          |                               |
|                      |                 |            |                |       |          |                               |
|                      |                 |            |                |       |          |                               |

## FOREIGN PATENT DOCUMENTS

|  | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation |    |
|--|-----------------|------|---------|-------|----------|-------------|----|
|  |                 |      |         |       |          | YES         | NO |
|  |                 |      |         |       |          | Abstract    |    |
|  |                 |      |         |       |          |             |    |
|  |                 |      |         |       |          |             |    |
|  |                 |      |         |       |          |             |    |
|  |                 |      |         |       |          |             |    |
|  |                 |      |         |       |          |             |    |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

# INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

Docket Number (Optional)  
89160.0010Application Number  
10/045,837

Applicant

GURVICH et al.

Filing Date

January 11, 2002

Group Art Unit

2817

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Bryant, et al., "Parameters of Microstrip Transmission Lines and of Coupled Pairs of Microstrip Lines", *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-16, No. 12, December 1968

Herzog, H.J., "Microstrip Couplers with Improved Directivity", *Electronics Letters*, Vol. 14, No. 3, February 2, 1978

Schaller, G., "Directivity Improvement of Microstrip N4-Directional Couplers", *AEU*, Vol. 26, No. 11, 1972, pages 508-509

Rehnmark, S., "High Directivity CTL-Couplers and a New Technique for the Measurement of CTL-Coupler Parameters", *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-25, No. 12, December 1977, pages 1116-1121

Podell, A., "A High Directivity Microstrip Coupler Technique", *International Microwave Symposium Digest*, 1970 G-MTT, pages 33-37

Sheleg, B. et al., "Broad-Band Directional Couplers Using Microstrip with Dielectric Overlays", *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-22, No. 12, December 1974, pages 1216-1220

Alexopoulos, N. et al., "Characteristics of Single and Coupled Microstrips on Anisotropic Substrates", *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-26, No. 6, June 1978, pages 387-393

Aikawa, M., "Microstrip Line Directional Coupler with Tight Coupling and High Directivity", *The Transactions of the IECE of Japan*, Vol. E 60, No. 4, Abstracts, pages 206-207, April 1977

Lange, J., "Interdigitated Stripline Quadrature Hybrid", *IEEE Transactions on Microwave Theory and Techniques*, December 1969, pages 1150-1151

Presser, A., "Interdigitated Microstrip Coupler Design", *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-26, No. 10, October 1978, pages 801-805

Kumar, et al., "Monolithic GaAs Interdigitated 90 Degree Hybrids With 50- and 25- OHM Impedances", 1982 IEEE Microwaves & Millimeter Wave Circuits Symposium, Dallas, TX 1982

Lange, J., "Interdigitated Stripline Quadrature Hybrid", *G-MTT Int., Microwave Symposium Digest*, pages 10-13, May 1969

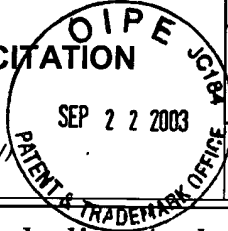
EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**

(Use several sheets if necessary)

Docket Number (Optional)  
89160.0010Application Number  
10/045,837

Applicant

GURVICH et al.

Filing Date

January 11, 2002

Group Art Unit

2817

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

Lane, J., "Interdigitated Stripline Quadrature Hybrid", *IEEE Transactions on Microwave Theory and Techniques*, December 1969, pages 1150-1151

Waugh, R. et al., "Unfolding the Lange Coupler", *IEEE Transactions on Microwave Theory and Techniques*, November 1972, MTT-20, pages 777-779

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.